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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,635	07/26/2000	Kevin R. Boyle	PHB 34,367	9407

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT	PAPER NUMBER
2683	8

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	K
	09/616,635	BOYLE, KEVIN R.	
	Examiner	Art Unit	
	Sharad Rampuria	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 January 2003.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____                                     |

## DETAILED ACTION

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 rejected under 35 U.S.C. 102(a) as being anticipated by Houlihan (5,467,324).

1. Regarding Claim 1, Houlihan (5,467,324) disclosed A body-worn personal communications apparatus (100; Fig.1; Col.3; 1-12), comprising: a physically-shortened electric antenna (136; Fig.1); a transceiver connected to said physically-shortened electric antenna (Col.3; 16-21); a microphone (132; Fig.1) connected to said transceiver; and a casing, wherein said transceiver is disposed within said casing, and wherein said physically-shortened electric antenna and said microphone are mounted on said casing. (Col.3; 21-40)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,7, 9-10, 14, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324), in view of Uno, Masahiro (JP 08162820 A).

5. Regarding Claim 5, Houlihan (5,467,324) disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Uno teaches in an analogous art, that The apparatus of claim 1, wherein said microphone is located at an end of said physically-shortened electric antenna furthest from said casing. (2) (Abstract & Constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

7. Regarding Claim 7, Houlihan (5,467,324) disclosed The apparatus of claim 5, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said

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microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51).

9. Regarding Claim 9, The above combination disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Uno teaches in an analogous art, that The apparatus of claim 5, wherein said microphone provides a top loading to said physically-shortened electric antenna. (2) (Abstract & Constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

10. Regarding Claim 10, Houlihan (5,467,324) disclosed A body-worn personal communications apparatus (100; Fig.1; Col.3; 1-12), comprising: a casing; a physically-shortened electric antenna mounted on said casing; (Col.3; 21-40) and Houlihan (5,467,324) fails to disclosed a microphone mounted on said physically-shortened electric antenna. However, Uno teaches in an analogous art, that a microphone (5) mounted on said physically-shortened electric antenna (2) (Abstract & Constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

14. Regarding Claim 14, The above combination disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Uno teaches in an analogous art, that The apparatus of claim 10,

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wherein said microphone is located at an end of said physically-shortened electric antenna furthest from said casing. (2) (Abstract & Constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

17. Regarding Claim 17, The above combination disclosed The apparatus of claim 10, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51).

18. Regarding Claim 18, The above combination disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Uno teaches in an analogous art, that The apparatus of claim 10, wherein said microphone provides a top loading to said physically-shortened electric antenna. (2) (Abstract & Constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324), in view of Charlier et al.

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2. Regarding Claim 2, Houlihan (5,467,324) disclosed all the particulars of the claim except a helical antenna. However, Charlier teaches in an analogous art, that The apparatus of claim 1, wherein said physically shortened electric antenna is a helical antenna. (Col.6; 23-29) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a helical antenna in order to minimize the space required for the antenna.

Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Uno, Masahiro (JP 08162820 A), further in view of Charlier et al.

11. Regarding Claim 11, The above combination disclosed all the particulars of the claim except a helical antenna. However, Charlier teaches in an analogous art, that The apparatus of claim 10, wherein said physically shortened electric antenna is a helical antenna. (Col.6; 23-29) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a helical antenna in order to minimize the space required for the antenna.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324), in view of Hirai et al.

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3. Regarding Claim 3, Houlihan (5,467,324) disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that The apparatus of claim 1, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a meander-line antenna in order to minimize the space required for the antenna.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Uno, Masahiro (JP 08162820 A), further in view of Hirai et al.

12. Regarding Claim 12, The above combination disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that The apparatus of claim 10, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a meander-line antenna in order to minimize the space required for the antenna.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) in view of Barnard (WO 00/13329).

4. Regarding Claim 4, Houlihan (5,467,324) disclosed all the particulars of the claim except the antenna is mounted transversely to a plane through the casing. However,

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Barnard teaches in an analogous art, that The apparatus of claim 1, wherein said physically-shortened electric antenna is mounted transversely to a plane through said casing. (in the casing; Col.5; 22-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the antenna is mounted transversely to a plane through the casing in order to provide a low bandwidth.

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Uno, Masahiro (JP 08162820 A), further in view of Barnard (WO 00/13329).

13. Regarding Claim 13, The above combination disclosed all the particulars of the claim except the antenna is mounted transversely to a plane through the casing. However, Barnard teaches in an analogous art, that The apparatus of claim 10, wherein said physically-shortened electric antenna is mounted transversely to a plane through said casing. (in the casing; Col.5; 22-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the antenna is mounted transversely to a plane through the casing in order to provide a low bandwidth.

Claims 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324), in view of McLean (GB 2036447).

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6. Regarding Claim 6, Houlihan (5,467,324) disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 5, wherein said physically shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

8. Regarding Claim 8, Houlihan (5,467,324) disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 6, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-64) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

Claims 15-16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Uno, Masahiro (JP 08162820 A), further , in view of McLean (GB 2036447).

15. Regarding Claim 15, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 10, further comprising: a transceiver, wherein said

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physically-shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

16. Regarding Claim 16, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 15, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu. (6:30-4:00) alternate Fri.(6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad k. Rampuria  
March 26, 2003



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